

WHAT IS CLAIMED IS:

1. A voltage detecting circuit, comprising:

a first terminal that is connected with a positive pole of a battery;

a second terminal that is connected with a negative pole of the battery;

a voltage dividing circuit that divides a voltage across the battery;

a reference voltage circuit that generates a reference voltage;

a comparator that outputs a signal on the basis of an output of the reference voltage circuit and an output of the voltage dividing circuit;

a first output circuit that is connected between the first terminal and the second terminal and outputs a signal on the basis of the output signal from the comparator;

an output terminal that outputs the output signal from the first output circuit; and

a second output circuit that outputs a signal to the output terminal on the basis of signals from the first terminal and the second terminal,

wherein the second output circuit changes over the output signal in accordance with a voltage value of the battery.

2. The voltage detecting circuit as claimed in claim 1, wherein the second output circuit comprises a depression-type n-ch MOS transistor and a depression-type p-ch MOS transistor which are connected in series between the output terminal and one of the first terminal and the second terminal,

wherein a signal based on a voltage of the first terminal is inputted to a gate electrode of the depression-type p-ch MOS transistor, and

wherein a signal based on a voltage of the second terminal is inputted to a gate electrode of the depression-type n-ch MOS transistor.

3. The voltage detecting circuit as claimed in claim 2, wherein the first output circuit comprises an enhancement-type n-ch MOS transistor and an enhancement-type p-ch MOS transistor which are connected in series between the first terminal and the second terminal,

wherein a signal based on the output of the comparator is inputted to gate electrodes of the enhancement-type p-ch MOS transistor and the enhancement-type n-ch MOS transistor, and

wherein an absolute value of any threshold voltage of the depression-type n-ch MOS transistor and the depression-type p-ch MOS transistor is larger than an absolute value of any threshold voltage of the enhancement-type n-ch MOS transistor and the

enhancement-type p-ch MOS transistor.